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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,512	07/08/2005	Takashi Fukutomi	OGW-0371	1667
7590 Patrick G. Burns Greer, Burns & Crain, Ltd. 300 South Wacker Drive, Suite 2500 Chicago, IL 60606			EXAMINER FISCHER, JUSTIN R	
			ART UNIT 1733	PAPER NUMBER
			MAIL DATE 08/27/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/541,512	Applicant(s) FUKUTOMI ET AL.	
	Examiner Justin R. Fischer	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 13, 2007 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suga (JP 52145904) and further in view of Kitamura (JP 58194970) and Kanenari (US 6,209,603). The references are applied in the same manner as set forth in the Non-Final Rejection mailed on November 2, 2006.

As best depicted in Figure 1, Suga discloses a pneumatic tire construction having an adhesive sealant layer 2 comprising a rubber component to be decomposed by peroxide (e.g. butyl rubber) and 0.1 to 0.8 parts by weight of peroxide per 100 parts by weight of said rubber component (Abstract). Suga, however, is completely silent with respect to the inclusion of reinforcing fibers in the sealant layer. In any event, it is

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extremely well known to include reinforcing fibers in a wide range of tire components, including similar adhesive sealant layers, in order to provide a high degree of strength and reinforcement, as shown for example by Kitamura (Abstract) and Kanenari (Column 1, Lines 5-10). It is particularly noted that Kitamura is directed to an extremely similar tire construction in which short fibers are included in an adhesive sealant layer. Absent any conclusive showing of unexpected results, one of ordinary skill in the art at the time of the invention would have found it obvious to include reinforcing fibers in the adhesive sealant layer of Suga. It is emphasized that reinforcing members are commonly included in a wide variety of tire components to provide a desired degree of strength/reinforcement. Lastly, as to the specific dimensions of the short fibers, Kanenari suggests that the claimed lengths are consistent with the commonly used fibers in the tire industry (Column 18, Lines 45+).

As to claim 2, the tire of Suga includes a protective rubber layer 3 (cover sheet rubber layer).

With respect to claim 3, the claim language is directed to the method of forming the tire and does not further define the claimed tire construction.

As to claims 4 and 5, the sea-island structure required by the claimed invention represents one of the common arrangements of fibrous reinforcement in the tire industry, as shown for example by Kanenari (Column 2, Lines 10-15 and Column 18, Lines 63+). In this instance, Kanenari suggests that such a structure is able to provide an effective amount of reinforcement, as opposed to prior art constructions in which short nylon fibers were used.

Response to Arguments

4. Applicant's arguments filed June 14, 2007 have been fully considered but they are not persuasive.

Applicant argues that Kanenari is directed to the inclusion of fibrillated fibers in a solid rubber component, as opposed to the liquid/adhesive component of Suga and the claimed invention. As set forth in the previous communications, Kitamura and Kanenari evidence the known use of short fibers/fibrillated fibers in a wide variety of tire components, including solid rubber components and liquid/adhesive layers. In view of the prior art, one of ordinary skill in the art at the time of the invention would have been amply motivated to include such fibers in the liquid/adhesive layer of Suga (provides increased reinforcement characteristics).

With respect to the dimensions of the fibrillated fiber, a fair reading of Kanenari does not suggest that the disclosed dimensions are not applicable to adhesive/sealant layers. It is agreed that Kanenari fails to expressly disclose an adhesive/sealant layer; however, the reference more broadly teaches the general use of fibers having the claimed dimensions in the tire industry (the claimed dimensions are consistent with those used in the tire industry). Absent any conclusive showing of unexpected results, one of ordinary skill in the art at the time of the invention would have found it obvious to include the fibrillated fibers of Kanenari in the adhesive/sealant of Suga.

Lastly, applicant points to Table 1 to establish a showing of unexpected results. However, the results are not persuasive. In particular, the only relevant comparison is between Application Example 1 and Comparative Example 6 (additional examples have

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differences in composition or thickness or are taught away by prior art (Comparative Example 5). In this instance, the respective examples have good processability and only differ slightly in seal performance. The data in Table 1 does not provide a "conclusive showing" of results for the claimed range between 100 and 5,000 microns. As detailed above, the data provides a single inventive example that only demonstrates a slight improvement in seal performance over the relevant comparative example. A more persuasive showing of unexpected results might include additional experiments including fibers having a diameter closer to 100 microns (e.g. 200 microns).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Justin R Fischer
Primary Examiner
Art Unit 1733

JRF

August 17, 2007